I claim:

1. A method for improving performance of an engine comprising:

contacting contaminated liquid hydrocarbon fuel comprising an initial concentration of drag reducer additive ("DRA") with one or more effective DRA removal agent(s) under conditions effective to produce decontaminated liquid hydrocarbon fuel comprising a reduced concentration of said DRA; and,

feeding said decontaminated liquid hydrocarbon fuel to said engine.

2. The method of claim 1 wherein said one or more effective DRA removal agents achieve a % DRA removal of about 10% or more when 1 g of the DRA removal agent is added in increments with agitation to 100 ml. of contaminated liquid hydrocarbon fuel comprising from about 8 to about 12 ppm of unsheared target DRA.

3. The method of claim 2 wherein said % DRA removal is about 20% or more.

4. The method of claim 2 wherein said % DRA removal is about 30% or more.

5. The method of claim 2 wherein said % DRA removal is about 40% or more.

6. A method for improving performance of an engine comprising:

contacting contaminated liquid hydrocarbon fuel comprising an initial concentration of drag reducer additive with one or more effective DRA removal agent(s) selected from the group consisting of graphites, activated carbons, fresh attapulgus clay, and combinations thereof,

under conditions effective to produce decontaminated liquid hydrocarbon fuel comprising a reduced concentration of said DRA; and,

feeding said decontaminated liquid hydrocarbon fuel to said engine.

7. The method of claim 6 wherein said one or more DRA removal agents have an adsorption capacity of about 0.03 wt.% or more.

8. The method of claim 6 wherein said conditions comprise incremental addition of the DRA removal agent(s) and agitation of the resulting mixture.

9. The method of claim 6 wherein said conditions comprise passing the contaminated liquid hydrocarbon fuel through a bed comprising said one or more effective DRA removal agent(s).

10. The method of claim 9 wherein said contacting produces used DRA removal agent(s), said method further comprising replacing said used DRA removal agent(s) with fresh DRA removal agent(s).

11. The method of claim 6 wherein said contacting said contaminated liquid hydrocarbon fuel comprising an initial concentration of DRA with one or more effective DRA removal agent(s) occurs at a location selected from the group consisting of: at a refinery; between a refinery and a fuel terminal; at a fuel terminal; between two different fuel terminals; between a fuel terminal and an airport storage tank; at an airport storage tank; between a fuel terminal and a tanker truck; at a tanker truck; between an airport storage tank and a tanker truck; between two different tanker trucks; between a tanker truck and an engine, at a fuel dispenser; between a fuel dispenser and a vehicle comprising the engine; and, at the engine.

12. The method of claim 6 further comprising preheating said one or more removal agents prior to use under conditions effective to remove adsorbed water without damaging the removal agent(s).

13. The method of claim 6 wherein said reduced concentration of DRA is sufficiently low to perform one or more function selected from the group consisting of permitting reignition of jet fuel after flameout, decreasing plugging of fuel filters and reducing formation of deposits on engine components selected from the group consisting of intake valves, combustion chambers, and fuel injectors.

14. The method of claim 6 wherein said liquid hydrocarbon fuel has a boiling range of from about 150 °F to about 750 °F.

15. The method of claim 6 wherein said liquid hydrocarbon fuel is selected from the group consisting of liquefied natural gas (LNG), liquefied petroleum gas (LPG), motor gasoline, aviation gasoline, distillate fuels such as diesel fuel and home heating oil, kerosene, jet fuel, No. 2 oil, residual fuel, No. 6 fuel, or bunker fuel.

16. The method of claim 6 wherein said liquid hydrocarbon fuel is selected from the group consisting of diesel fuel, jet fuel, aviation gasoline, and motor gasoline.

17. The method of claim 6 wherein said liquid hydrocarbon fuel is jet fuel.

18. The method of claim 17 wherein said reduced concentration of DRA is sufficiently low to permit reignition of jet fuel after flameout.

19. The method of claim 6 wherein said drag reducer additive comprises a polyalphaolefin having a peak molecular weight of about 1 million Daltons or more.

20. The method of claim 18 wherein said polyalphaolefin has a peak molecular weight of about 10 million Daltons or more.

21. The method of claim 6 wherein said DRA comprises two different linear alpha olefins (LAO's) or more having from about 6 to about 12 carbon atoms, the number of carbon atoms of the at least two different LAO's differing by 6.

22. The method of claim 6 wherein said DRA comprises one or more polyalphaolefins made by solution polymerization.

23. The method of claim 6 wherein said DRA comprises polar groups.

24. The method of claim 23 wherein said DRA comprises organic polar groups.

25. The method of claim 23 wherein said polar groups comprise a moiety selected from the group consisting of oxygen, sulfur, nitrogen, halogen, phosphorus, unsaturated carbon-carbon bonds, and combinations thereof.

26. The method of claim 24 wherein said organic polar groups comprise a moiety selected from the group consisting of oxygen, sulfur, nitrogen, halogen, phosphorus, unsaturated carbon-carbon bonds, and combinations thereof.

27. A method for improving performance of an engine comprising:

contacting contaminated liquid hydrocarbon fuel comprising an initial concentration of drag reducer additive ("DRA") with one or more effective DRA removal agent comprising graphite under conditions effective to produce decontaminated liquid hydrocarbon fuel comprising a reduced concentration of said DRA; and,

feeding said decontaminated liquid hydrocarbon fuel to said engine.

28. The method of claim 27 wherein said graphite is selected from the group consisting of graphite powders and graphite particulates having an adsorption capacity of about 0.01 wt.% or more.

29. The method of claim 27 wherein said graphite comprises granules having an average diameter of from about 0.01 microns to about 10,000 microns.

30. The method of claim 28 wherein said graphite comprises granules having an average diameter of from about 0.01 microns to about 10,000 microns.

31. The method of claim 27 wherein said graphite comprises granules having an average diameter of from about 0.1 microns to about 1,000 microns.

32. The method of claim 28 wherein said graphite comprises granules having an average diameter of from about 0.1 microns to about 1,000 microns.

33. The method of claim 27 wherein said graphite comprises granules having an average diameter of from about 1 micron to about 100 microns.

34. The method of claim 28 wherein said graphite comprises granules having an average diameter of from about 1 micron to about 100 microns.

35. The method of claim 27 wherein said graphite is selected from the group consisting of graphite powders and graphite particulates having an adsorption capacity of about 0.03 wt.% or more.

36. The method of claim 29 wherein said adsorption capacity is about 0.03 wt.% or more.

37. The method of claim 32 wherein said adsorption capacity is about 0.03 wt.% or more.

38. The method of claim 34 wherein said adsorption capacity is about 0.03 wt.% or more.

39. The method of claim 9 wherein said adsorption capacity is about 0.04 wt% or more.

40. The method of claim 27 wherein said adsorption capacity is about 0.04 wt%.

41. The method of claim 27 wherein said graphite is selected from the group consisting of natural graphites, synthetic graphites, expanded graphites, and combinations thereof.

42. The method of claim 41 wherein said graphite is selected from the group consisting of purified carbon, natural graphite, silica (crystalline quartz), synthetic graphite, and combinations thereof.

43. The method of claim 35 wherein said graphite is selected from the group consisting of purified carbon, natural graphite, silica (crystalline quartz), synthetic graphite, and combinations thereof.

44. The method of claim 28 wherein said conditions comprise incremental addition of the DRA removal agent(s) and agitation of the resulting mixture.

45. The method of claim 28 wherein said conditions comprise passing the contaminated liquid hydrocarbon fuel through a bed comprising said one or more effective DRA removal agent(s).

46. The method of claim 45 wherein said contacting produces used DRA removal agent(s), said method further comprising replacing said used DRA removal agent(s) with fresh DRA removal agent(s).

47. The method of claim 28 wherein said contacting said contaminated liquid hydrocarbon fuel comprising an initial concentration of DRA with one or more effective DRA removal agent(s) occurs at a location selected from the group consisting of: at a refinery; between a refinery and a fuel terminal; at a fuel terminal; between two different fuel terminals; between a fuel terminal and an airport storage

tank; at an airport storage tank; between a fuel terminal and a tanker truck; at a tanker truck; between an airport storage tank and a tanker truck; between two different tanker trucks; between a tanker truck and an engine, at a fuel dispenser; between a fuel dispenser and a vehicle comprising the engine; and, at the engine.

48. The method of claim 28 further comprising preheating said one or more removal agents prior to use under conditions effective to remove adsorbed water without damaging the removal agent(s).

49. The method of claim 28 wherein said reduced concentration of DRA is sufficiently low to perform one or more function selected from the group consisting of permitting reignition of jet fuel after flameout, decreasing plugging of fuel filters and reducing formation of deposits on engine components selected from the group consisting of intake valves, combustion chambers, and fuel injectors.

50. The method of claim 28 wherein said liquid hydrocarbon fuel has a boiling range of from about 150 °F to about 750 °F.

51. The method of claim 28 wherein said liquid hydrocarbon fuel is selected from the group consisting of liquefied natural gas (LNG), liquefied petroleum gas (LPG), motor gasoline, aviation gasoline, distillate fuels such as diesel fuel and home heating oil, kerosene, jet fuel, No. 2 oil, residual fuel, No. 6 fuel, or bunker fuel.

52. The method of claim 28 wherein said liquid hydrocarbon fuel is selected from the group consisting of diesel fuel, jet fuel, aviation gasoline, and motor gasoline.

53. The method of claim 28 wherein said liquid hydrocarbon fuel is jet fuel.

54. The method of claim 53 wherein said reduced concentration of DRA is sufficiently low to permit reignition of jet fuel after flameout.

55. The method of claim 28 wherein said drag reducer additive comprises a polyalphaolefin having a peak molecular weight of about 1 million Daltons or more.

56. The method of claim 54 wherein said polyalphaolefin has a peak molecular weight of about 10 million Daltons or more.

57. The method of claim 28 wherein said DRA comprises two different linear alpha olefins (LAO's) or more having from about 6 to about 12 carbon atoms, the number of carbon atoms of the at least two different LAO's differing by 6.

58. The method of claim 28 wherein said DRA comprises one or more polyalphaolefins made by solution polymerization.

59. The method of claim 28 wherein said DRA comprises polar groups.

60. The method of claim 59 wherein said DRA comprises organic polar groups.

61. The method of claim 59 wherein said polar groups comprise a moiety selected from the group consisting of oxygen, sulfur, nitrogen, halogen, phosphorus, unsaturated carbon-carbon bonds, and combinations thereof.

62. The method of claim 60 wherein said organic polar groups comprise a moiety selected from the group consisting of oxygen, sulfur, nitrogen, halogen, phosphorus, unsaturated carbon-carbon bonds, and combinations thereof.

63. A method for improving performance of an engine comprising:

contacting contaminated liquid hydrocarbon fuel comprising an initial concentration of drag reducer additive ("DRA") with one or more effective DRA removal agent(s) comprising activated carbon under

conditions effective to produce decontaminated liquid hydrocarbon fuel comprising a reduced concentration of said DRA; and,

feeding said decontaminated liquid hydrocarbon fuel to said engine.

64. The method of claim 63 wherein said activated carbon has an adsorption capacity of about 0.01 wt.% or more.

65. The method of claim 63 wherein said activated carbon has an adsorption capacity of about 0.02 wt.% or more.

66. The method of claim 63 wherein said activated carbon has an adsorption capacity of about 0.03 wt.% or more.

67. The method of claim 64 wherein said conditions comprise incremental addition of the DRA removal agent(s) and agitation of the resulting mixture.

68. The method of claim 64 wherein said conditions comprise passing the contaminated liquid hydrocarbon fuel through a bed comprising said one or more effective DRA removal agent(s).

69. The method of claim 68 wherein said contacting produces used DRA removal agent(s), said method further comprising replacing said used DRA removal agent(s) with fresh DRA removal agent(s).

70. The method of claim 64 wherein said contacting said contaminated liquid hydrocarbon fuel comprising an initial concentration of DRA with one or more effective DRA removal agent(s) occurs at a location selected from the group consisting of: at a refinery; between a refinery and a fuel terminal; at a fuel terminal; between two different fuel terminals; between a fuel terminal and an airport storage tank; at an airport storage tank; between a fuel terminal and a tanker truck; at a tanker truck; between an airport storage tank and a tanker truck; between two different

tanker trucks; between a tanker truck and an engine, at a fuel dispenser; between a fuel dispenser and a vehicle comprising the engine; and, at the engine.

71. The method of claim 64 further comprising preheating said one or more removal agents prior to use under conditions effective to remove adsorbed water without damaging the removal agent(s).

72. The method of claim 64 wherein said reduced concentration of DRA is sufficiently low to perform one or more function selected from the group consisting of permitting reignition of jet fuel after flameout, decreasing plugging of fuel filters and reducing formation of deposits on engine components selected from the group consisting of intake valves, combustion chambers, and fuel injectors.

73. The method of claim 64 wherein said liquid hydrocarbon fuel has a boiling range of from about 150 °F to about 750 °F.

74. The method of claim 64 wherein said liquid hydrocarbon fuel is selected from the group consisting of liquefied natural gas (LNG), liquefied petroleum gas (LPG), motor gasoline, aviation gasoline, distillate fuels such as diesel fuel and home heating oil, kerosene, jet fuel, No. 2 oil, residual fuel, No. 6 fuel, or bunker fuel.

75. The method of claim 64 wherein said liquid hydrocarbon fuel is selected from the group consisting of diesel fuel, jet fuel, aviation gasoline, and motor gasoline.

76. The method of claim 64 wherein said liquid hydrocarbon fuel is jet fuel.

77. The method of claim 76 wherein said reduced concentration of DRA is sufficiently low to permit reignition of jet fuel after flameout.

78. The method of claim 64 wherein said drag reducer additive comprises a polyalphaolefin having a peak molecular weight of about 1 million Daltons or more.

79. The method of claim 77 wherein said polyalphaolefin has a peak molecular weight of about 10 million Daltons or more.

80. The method of claim 64 wherein said DRA comprises two different linear alpha olefins (LAO's) or more having from about 6 to about 12 carbon atoms, the number of carbon atoms of the at least two different LAO's differing by 6.

81. The method of claim 64 wherein said DRA comprises one or more polyalphaolefins made by solution polymerization.

82. The method of claim 64 wherein said DRA comprises polar groups.

83. The method of claim 82 wherein said DRA comprises organic polar groups.

84. The method of claim 82 wherein said polar groups comprise a moiety selected from the group consisting of oxygen, sulfur, nitrogen, halogen, phosphorus, unsaturated carbon-carbon bonds, and combinations thereof.

85. The method of claim 83 wherein said organic polar groups comprise a moiety selected from the group consisting of oxygen, sulfur, nitrogen, halogen, phosphorus, unsaturated carbon-carbon bonds, and combinations thereof.

86. A method for improving performance of an engine comprising:

contacting contaminated liquid hydrocarbon fuel comprising an initial concentration of DRA with fresh attapulgus clay under conditions effective to produce decontaminated liquid hydrocarbon fuel comprising a reduced concentration of said DRA; and,

feeding said decontaminated liquid hydrocarbon fuel to said engine.

87. The method of claim 86 wherein said fresh attapulgus clay is effective to remove about 10% or more of said DRA when 1 g of the fresh attapulgus clay is added in increments of from about 0.02 gram to about 0.1 gram, with agitation, to 100 ml. of contaminated liquid hydrocarbon fuel comprising from about 8 to about 12 ppm of the unsheared DRA.

88. The method of claim 87 wherein said fresh attapulgus clay comprises granules, a majority of said granules having a mesh size of from about 30 to about 90.

89. The method of claim 87 wherein said conditions comprise incremental addition of the DRA removal agent(s) and agitation of the resulting mixture.

90. The method of claim 87 wherein said conditions comprise passing the contaminated liquid hydrocarbon fuel through a bed comprising said one or more effective DRA removal agent(s).

91. The method of claim 90 wherein said contacting produces used DRA removal agent(s), said method further comprising replacing said used DRA removal agent(s) with fresh DRA removal agents.

92. The method of claim 87 wherein said contacting said contaminated liquid hydrocarbon fuel comprising an initial concentration of DRA with one or more effective DRA removal agent(s) occurs at a location selected from the group consisting of: at a refinery; between a refinery and a fuel terminal; at a fuel terminal; between two different fuel terminals; between a fuel terminal and an airport storage tank; at an airport storage tank; between a fuel terminal and a tanker truck; at a tanker truck; between an airport storage tank and a tanker truck; between two different tanker trucks; between a tanker truck and an engine, at a fuel dispenser; between a fuel dispenser and a vehicle comprising the engine; and, at the engine.

93. The method of claim 87 further comprising preheating said one or more removal agents prior to use under conditions effective to remove adsorbed water without damaging the removal agent(s).

94. The method of claim 87 wherein said reduced concentration of DRA is sufficiently low to perform one or more function selected from the group consisting of permitting reignition of jet fuel after flameout, decreasing plugging of fuel filters and reducing formation of deposits on engine components selected from the group consisting of intake valves, combustion chambers, and fuel injectors.

95. The method of claim 87 wherein said liquid hydrocarbon fuel has a boiling range of from about 150 °F to about 750 °F.

96. The method of claim 87 wherein said liquid hydrocarbon fuel is selected from the group consisting of liquefied natural gas (LNG), liquefied petroleum gas (LPG), motor gasoline, aviation gasoline, distillate fuels such as diesel fuel and home heating oil, kerosene, jet fuel, No. 2 oil, residual fuel, No. 6 fuel, or bunker fuel.

97. The method of claim 87 wherein said liquid hydrocarbon fuel is selected from the group consisting of diesel fuel, jet fuel, aviation gasoline, and motor gasoline.

98. The method of claim 87 wherein said liquid hydrocarbon fuel is jet fuel.

99. The method of claim 98 wherein said reduced concentration of DRA is sufficiently low to permit reignition of jet fuel after flameout.

100. The method of claim 87 wherein said drag reducer additive comprises a polyalphaolefin having a peak molecular weight of about 1 million Daltons or more.

101. The method of claim 99 wherein said polyalphaolefin has a peak molecular weight of about 10 million Daltons or more.

102. The method of claim 87 wherein said DRA comprises two different linear alpha olefins (LAO's) or more having from about 6 to about 12 carbon atoms, the number of carbon atoms of the at least two different LAO's differing by 6.

103. The method of claim 87 wherein said DRA comprises one or more polyalphaolefins made by solution polymerization.

104. The method of claim 87 wherein said DRA comprises polar groups.

105. The method of claim 104 wherein said DRA comprises organic polar groups.

106. The method of claim 104 wherein said polar groups comprise a moiety selected from the group consisting of oxygen, sulfur, nitrogen, halogen, phosphorus, unsaturated carbon-carbon bonds, and combinations thereof.

107. The method of claim 104 wherein said organic polar groups comprise a moiety selected from the group consisting of oxygen, sulfur, nitrogen, halogen, phosphorus, unsaturated carbon-carbon bonds, and combinations thereof.